G2 cont.

7. A CD-I system, comprising the system of claim 12.

G3

9. A CD-I system, comprising the system of claim 3.

REMARKS

The purpose of the present continuation is to advance a new independent claim, not advanced in the parent, and to advance arguments with respect to the dependent claims that were not advanced in the prior appeal.

Herein, claims 12 - 15 are substituted for claims 1, 8, 10, and 11, respectively. The dependent claims have been amended to make their language consistent with new claim 12 and to remove unnecessary limitations, some of which were removed automatically by dependency on new claim 12.

New claims 16 and 17 are added to focus more on the embodiment of figure 4, which the Examiner has previously indicated to be allowable.

Art rejection: claims 1&12

Upon a review of the language of old claim1, Applicants determined that the claim was sufficiently broad to read upon cursor keys. Accordingly, the claim has been replaced with new claim 12.

New claim 12 recites a user-interface means for supplying signals representative of at least one desired direction of cursor motion. The signals are supplied responsive to user manipulation of a ***single*** direction-manipulator. The desired direction simultaneously includes both a desired vertical component and a desired horizontal component with respect to the cursor

as displayed. This language precludes the claim reading directly upon cursor keys. The cursor keys specify only a desired vertical component or a desired horizontal component of direction of motion.

Cursor keys, such as those discussed in the Kato reference, are not very ergonomic. They provide only for horizontal and vertical motion, and generally only within an application which is line or field oriented, such as a word processing or database interface application.

A mouse type cursor control device, which can specify direct action including both vertical and horizontal components simultaneously, is much more ergonomic than cursor keys. Takahashi does show a mouse type cursor device. However, the teachings of Kato cannot be incorporated into the teachings of Takahashi to achieve the recited changes in a direction which simultaneously includes both vertical and horizontal components. The mechanism of Kato is only adapted to achieving changes in speed after a predetermined interval in a single horizontal or vertical direction at a time.

A mechanism that can achieve the changes in speed, after a predetermined interval, in a single direction containing both vertical and horizontal components is taught by Applicants disclosure, e.g. with respect to figure 4. No mechanism able to achieve this function is taught or suggested by either of the references, whether taken singly or in combination.

Moreover, if the mechanism of Kato were to be used in the mechanism of Takahashi, the change in cursor speed effected after a delay would only be in either a horizontal or a vertical direction.

Accordingly, newly advanced claim 12 distinguishes patentably over the combination of Takahashi and Kato.

Art rejections: Claim 3

Applicants did not previously separately argue their dependent claims, therefore they would like to do that now.

Claim 3 recites that data transmission involves a temporal basis in terms of repetitive events. The mathematical definition of "basis" is a set of linearly independent vectors that span a vector space[1]. In the case of the one-dimensional vector space of time the basis would be a single time interval.

Claim 3 further recites that the predetermined time interval is measured in terms of the number of events. Therefore the change in speed is triggered by a time interval measured by number of events.

The examiner has failed to indicate where this limitation is taught or suggested in the references. Takahashi teaches away from this concept, by varying a number of output signals per unit time from the mouse. Accordingly, in Takahashi, per the abstract, the number of events does not signal time interval. Quite the contrary different numbers of events can occur in the same time interval. Applicants are unable to locate where Kato may have anything relating to these recitations.

Therefore claim three distinguishes patentably over the references.

Art rejections: claim 4

The limitations relating to relatively slow and relatively high speeds have been moved from claim 1 to this claim, because those limitations do not appear in new claim 12.

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[1] See e.g. Williamson & Trotter, Multivariable Mathematics: Linear Algebra, Differential Equations, Calculus, (Prentice-Hall 1974) p. 105, copy enclosed

The claim further recites that a respective one of the respective events involves a respective update of the cursor position. In other words, the predetermined time interval is measured in terms of the number of updates of cursor position, with the low speed effected by short displacement per update, and a large speed being effected by large displacement per update.

Applicants are unable to find, and Examiner has not indicated, where these limitations are taught or suggested by the references. Indeed, the Takahashi reference appears to teach away from this concept by increasing an number of events in order to achieve a change in speed.

Art rejections: Claim 6 (and 15)

This claim recites counting means to count the number of events elapsed since the user-interface was last activated. Applicants are unable to find, and Examiner has not indicated, where these limitations are taught or suggested by the references.

New claims 13 -15

These claims are made independent, while corresponding old claims 8, 10, and 11 were dependent. However, Applicants believe that with respect to the cited prior art, new claims 13-15 are analogous to claims 12, 5, and 6, respectively.

Applicants respectfully submit that they have answered each issue raised by the Examiner and that the application is accordingly in condition for allowance. Allowance is therefore respectfully requested.

Respectfully submitted,

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MARKED UP VERSION OF CLAIMS

3. (amended) The system of claim [1] 12, wherein data transmission from the user-interface means to the [cursor control] processing means involves a temporal basis in terms of repetitive events, and wherein the [cursor control] processing means or the user interface means is operative to measure the predetermined time interval in terms of the number of events.

4. (amended) The system of Claim 3, wherein

- the first speed is a relatively low speed and the second speed is a relatively high speed;
- a respective one of the respective events involves a respective update of a cursor position, [and wherein]
- the relatively low speed is effected by a relatively short displacement of the cursor per update, and [wherein]
- the relatively high speed is effected by a relatively large displacement of the cursor per update.

5. (amended) The system of claim [1] 12, wherein

- the first speed is a relatively low speed and the second speed is a relatively high speed; and
- the user-interface means or the processing means is operative to render at least the relatively low speed or the relatively high speed variable in response to the user manipulating the [user-interface] direction-manipulator.

6. (amended) The system of claim 3, wherein the [cursor control] processing means or the user-interface means is provided with a respective counting means to count the number of events elapsed since the user-interface was last activated.

7. (amended) A CD-I system, comprising the [The] system of claim [1, comprising a CD-I system] 12.

9. (amended) A CD-I system, comprising the [The] system of claim 3 [, comprising a CD-I system].